Field Report Gateway National Recreation Area

■ 1.0 Summary

The Gateway National Recreation Area (NRA) contains three geographically separate units in the New York City area. These are: Sandy Hook, Jamaica Bay/Breezy Point, and Staten Island. There are several themes common to each of Gateway's units with respect to transportation needs. Access is primarily by automobile. Regional congestion limits or impacts vehicular access. Transit is generally poor or does not quite penetrate the park units; this in the metropolitan area with the most extensive transit system in the country. Water access is a viable option at each Unit yet docking facilities and intra-unit bus systems are needed to provide access for public visitation.

By its very nature, the "gateway" to the New York/New Jersey estuary is a water-oriented place. Given the resurgence of ferry transportation services in New York Harbor, expansion of these services to include the Gateway NRA is the logical next step. Funding will be needed to develop ferry docks and related amenities. In addition, in several of the sites within Gateway, shuttle buses can provide dramatically improved access.

The specific ATS needs for these units is summarized as follows:

Sandy Hook

- Expansion of existing water transportation services from New York City
- Addition of motor coach transportation from other population centers
- Expansion of internal bus circulation system
- Improved facilities for bicycle transportation

• Staten Island

- Construction of a ferry terminal and supporting shuttle service at Fort Wadsworth
- Implementation of a shuttle bus to transport city bus passengers to/from park entrance at Great Kills
- Increased MTA bus services through Fort Wadsworth during weekends and noncommuter hours.
- Coordination with the New York City Department of Transportation to implement the bicycle/multi-use trail to connect all three Staten Island sites as part of the New York City greenway system.

• Jamaica Bay/Breezy Point

- Implementation of a ferry terminal and supporting facilities at Fort Tilden
- Implementation of supporting water taxi services from Fort Tilden to nearby sites
- Improvement of existing bus transit services to coordinate schedules and provide better connections to park sites
- Consideration of an intra-unit shuttle bus service to connect the separate sites and/or intra-unit water transportation, especially to and from Jamaica Bay
- Implementation of the completion/extension of the Rockaway-Gateway Greenway around Jamaica Bay and other improved facilities for bicycle transportation.

■ 2.0 Background Information

2.1 Location

Gateway NRA is located at the entrance to the New York/New Jersey estuary where two arms of land stretch across the water forming a natural gateway to New York City. It is from this "gate" that the Gateway NRA takes its name (National Park Service, Gateway National Recreation Area Web Page, 1999). Gateway was created from land that was the property of the State of New Jersey, New York City, various Army and Navy installations, and private owners. It includes landscapes and historic buildings of exceptional quality, including: two of the finest beaches on the East Coast (Sandy Hook and Breezy Point); a holly forest (Sandy Hook) and wildlife refuge (Jamaica Bay); and military fortifications (Fort Wadsworth and Fort Hancock). The fact that these areas – plus such large open spaces as Floyd Bennett Field and Great Kills Park – are in the most populous metropolitan region of the country makes them even more valuable (National Park Service, Gateway National Recreation Area General Management Plan [GMP], 1979).

Three management units (Staten Island, Jamaica Bay/Breezy Point, and Sandy Hook) have been designated within the national recreation area boundary; these correspond to the geographically separated land areas joined by New York Bay and peripheral waters. These units are administered by managers who are under the line authority of the superintendent of the park. Overall responsibility for Gateway management lies with the General Superintendent. Refer to Figure 2.1 for location and basic physical configuration.

2.2 Mission and Goals of the Recreation Area

Established on October 27, 1972 as America's first urban national park, Gateway provides recreational opportunities for residents and visitors in the Eastern United States' most densely populated area. The purpose of the park, as described in the enabling legislation, is to "preserve and protect for the use and enjoyment of present and future generations an area possessing outstanding natural and recreational features (GMP)."



Figure 2.1 Gateway National Recreation Area

2.3 Visitation Levels and Visitor Profile

Gateway NRA accommodates approximately 7.8 million visitors per year, about 53 percent of whom visit during the summer months. Of these, approximately 21 percent are for non-recreation visits such as visits by school groups and other educational activities. Visitation by unit, for calendar year 1998 is:

Sandy Hook 2,337,642
 Staten Island 2,648,292
 Jamaica Bay 2,780,319

By comparison, visitation in 1995 was 6.1 million, with 6.4 million in 1996 and 7.0 million in 1997. This indicates a trend of approximately 4.0 percent annual growth. It is not clear as to whether this rate of growth will continue, but as facilities are improved additional visitation is likely.

■ 3.0 Sandy Hook Unit

Sandy Hook is located on a peninsula at the northern end of New Jersey's Atlantic shore-line just north of the town of Atlantic Highlands. It covers approximately 1,665 land acres, including 13 miles of ocean beaches and sheltered bayside coves, hundreds of acres of ecologically significant barrier-beach vegetation, and at the northern end of the lands, facilities, and fortifications of the Fort Hancock complex. The U.S. Coast Guard and U.S. Army Corps of Engineers maintain properties at the Sandy Hook tip that are excluded from the park. The NPS owns and administers the historic Sandy Hook Lighthouse. Total acreage of the enclave lands is 180 acres. Refer to Figure 3.1 for a map of this unit. (The superintendent of this unit is Russ Wilson.)



Figure 3.1 Sandy Hook Unit

3.1 Existing Conditions, Issues and Concerns

The Sandy Hook Unit is the only unit of the Gateway NRA located in New Jersey. The unit is formed by a spit of land jutting out into the Sandy Hook Bay from Monmouth County. As such, access to the park from the other Gateway units is either by boat, a

short-distance with varying travel times, or by automobile, a minimum of one-hour travel time. This means that although the Sandy Hook Unit is a part of the Gateway NRA, its location limits the amount of time that park staff from other units can meet with Sandy Hook staff in person.

3.1.1 Transportation Conditions, Issues and Concerns

Access

Most people get to Sandy Hook by automobile. Primary auto access is along Route 36, a local east-west highway that connects to the Garden State Parkway. Circulation within the unit is along the main north-south road, which connects with Route 36 at the Highlands bridge just south of Sandy Hook and runs the full length of the unit into the Fort Hancock/North Beach area. Secondary roads permit access to developed areas east and west of the main road.

The Highlands bridge is an historic drawbridge located less than one-half mile from the park's entrance. The bridge, which has a low-clearance, spans an actively used boating route, which means the bridge is frequently opened. The drawbridge and the park entrance gate both cause motorist delays. During the peak summer months, queues of more than one mile can form. When queues are long (and when parking is full), variable message signs are intermittently used north of exit 117 on the Parkway to warn of congestion on Route 36 and park closures due to crowding. Unfortunately, this information system is not deployed consistently and thus is an ineffective means for communication.

The nearest local transit service to Sandy Hook is provided by New Jersey Transit. The M24 bus runs between Red Bank and Highlands and stops at the park entrance. A bus rider would then have to walk two miles to the nearest bathing beach while other bathing beaches extend approximately five miles into the park. There are also regional connections provided by Academy Bus Lines, a private carrier, New Jersey Transit Commuter Rail (North Jersey Coast Line Station at Red Bank), and New York Fast Ferry (providing service between nearby Highlands, New Jersey and Manhattan), but none provide service to the park itself. The potential for linking these services to the park facilities should be explored.

Parking

The beaches at Sandy Hook are very popular. A total of 4,579 parking spaces are provided and these spaces typically are filled to capacity eight to 10 times per year, usually on Sundays. This usually occurs by 11:30 a.m., whereupon motorists arriving after that wait for 1.5 to 2.0 hours until a sufficient number of cars have departed to provide new parkers an opportunity to quickly find a space. The queuing of vehicles on busy days presents congestion problems for the park as there is little room to store waiting cars. Further, anyone trying to access non-beach facilities can get caught up in this congestion.



Figure 3.2 Contact Station at Sandy Hook

Water Transportation

During the summer months New York Waterway, offers weekend ferry service directly between Battery Park in Manhattan and a temporary dock (spud barge) at Fort Hancock on Sandy Hook. This service is marketed as an "escape to the beach" and last year carried approximately 5,000 passengers. The success of this service serves as an important basis for consideration of expansion of water access to Sandy Hook.

Bicycle Transportation

The main access road to and within Sandy Hook presents an outstanding opportunity for bicycle access. It is a scenic, relatively flat and straight roadway. Increased bicycle access could increase beach access without an undue impact on parking resources. Unfortunately, there is little accommodation for bicycles at this time. No paths or lanes are provided and potential conflicts with vehicle traffic present safety risks for cyclists. In 1998, a cyclist was killed in a collision with a motor vehicle. The access road, which is four lanes wide (two lanes per direction), could potentially be reconfigured to accommodate bicycles (see discussion below).

Internal Circulation

One of the key issues for alternative transportation access at Sandy Hook is internal circulation. For people who arrive by alternative means (ferry, bus, bicycle, etc.) transportation services are needed within the park. At present, the current ferry operation includes a bus connection between the beaches and the ferry terminal. A second service, the Bayshore Beach Trolley, operates between business in Highlands and the beaches within Sandy Hook. The trolley service is primarily intended to encourage spending at local businesses and is not geared toward internal park circulation.





3.1.2 Community Development Conditions, Issues and Concerns

The government facilities that have occupied Sandy Hook for many years, although smaller than in the past, constitute a community of residents, employees, and in the future cultural and educational institutions, among others. At present, 600 people work at Sandy Hook, and 300 Coast Guard and 40 Park Service personnel live there. With nearly 100 buildings at Fort Hancock, many uses are either ongoing or contemplated, including facilities for NOAA, Brookdale Community College, the New Jersey Marine Science Consortium, and others. The park is in the midst of a program to lease up to 40 additional buildings. The vision for is to return the buildings to active use to serve a community of educators, researches and businesses who share an appreciation of the fort's history and Sandy Hook's seashore setting

3.1.3 Natural or Cultural Resource Conditions, Issues and Concerns

Sandy Hook is subject to many of the natural resource concerns that are present at other coastal facilities, including environmentally sensitive areas, the potential for beach erosion and flooding, and shorebird nesting areas. Cultural resources include historic military installations including a proving ground. The challenge with the military facilities is to preserve them (with limited resources) and provide quality interpretive programs for visitors.

3.1.4 Recreation Conditions, Issues and Concerns

Because the number of parking spaces is limited, this helps to protect beaches from over use while at the same time additional beach capacity exists. Finding ways to expand use through non-automobile access is the key management challenge.

3.2 Planning and Coordination

Specific transportation plans for Sandy Hook include the possible construction of bike lane/bikeway parallel to the park road and the continuation of ferry with an on-unit bus route. As with other Gateway Units, waterborne transportation is a key concern and the unit has submitted several grant applications in an attempt to upgrade its present ferry dock facility.

3.2.1 Public and Agency Coordination

Sandy Hook coordinates with various local government and regional agencies with respect to on- and off-site transportation issues. Locally, Sandy Hook coordinates with the townships of Highlands, Atlantic Highlands, and Sea Bright, as well as the County of Monmouth. Regionally, Sandy Hook, as part of Gateway NRA, coordinates with NJDOT and the North Jersey Transportation Planning Authority, the MPO for Northern New Jersey.

3.3 Assessment of Need and System Options

3.3.1 Magnitude of Need

Given the high rate of automobile dependency for access to Sandy Hook coupled with its location on a highly navigable bay, the need for alternative transportation systems at Sandy Hook is significant. Bringing people to Sandy Hook by water or motor coach are realistic options to increase visitation without expansion of parking. Given the existence of these services in the region, the expansion of ATS to Sandy Hook, especially on weekends, appears feasible.

3.3.2 Range of Feasible Alternatives

In the short term, the existing docking facilities to accommodate water access appear adequate. Investment is likely needed in the on-shore facilities to help guide ferry passengers and to transport them around the park. The current shuttle bus that is associated with the ferry could be expanded to accommodate more passengers and to deliver people to more destinations. Another alternative is to offer ferry passengers free or low-cost access to bicycles as a means of circulation during their visit. Further, by connecting the shuttle bus with the contact station as well as other non-beach destinations, visitors arriving either by ferry or New Jersey Transit buses would have a means to circulate throughout the park.

In the medium term, bicycle facilities are needed to accommodate circulation within the park as well as to and from the park. One possibility is to reconfigure the existing roadway to accommodate bicycles by reducing the number of travel lanes. This could be accomplished on long road segments between intersections while maintaining an adequate number of travel lanes at the intersections themselves.

A second medium-term option that should be explored is the development of park and ride facilities outside the park. This could possibly be accomplished at the parking areas currently used by weekday commuters at the Highlands Ferry dock. The basis for this concept is to permit increased park visitation without parking expansion within the park.

In the long term, a well-developed ferry terminal and inter-unit ferry services should be investigated. This could include expanded service to Lower Manhattan and to other NPS facilities (Ellis Island and Statue of Liberty).

4.0 Staten Island Unit

The Staten Island Unit of Gateway extends along the southeastern shore of the island and includes sites at Fort Wadsworth, Miller Field, and Great Kills Park. Hoffman and Swinburne Islands are also part of this unit, although they are closed to visitors. Each of the three actively used sites is distinct in terms of uses, resources, and visitation. Fort Wadsworth, located next to the Verrazano-Narrows Bridge adjacent to the Arrochar residential section, is a former military installation. Miller Field (226 acres), located in the Grant City/New Dorp sections of Staten Island, is a former army airfield. Great Kills Park (1,000 acres), located to the south of Miller Field in the Oakwood section, is a well-used water recreation resource. See Figure 4.1 for a map of the Staten Island Unit. (The super-intendent of this unit is Shirley McKinney.)

4.1. Existing Conditions, Issues and Concerns

In many respects, the Staten Island Unit is a local park for Staten Island residents with the exception of Fort Wadsworth, which attracts visitors from the New York region and is expected to draw visitors from other U.S. and international destinations. Great Kills Park and Miller Field are located adjacent to residential communities and do not have good regional highway access. The adjacent areas are well developed and congestion can be significant. Fort Wadsworth, acquired from the Department of Defense in 1995, was only recently integrated with the rest of the Staten Island Unit. Given the access constraints and the congestion, one of the key issues for this unit of the park is to minimize the impacts of congestion or overcrowding.

4.1.1 Transportation Conditions, Issues and Concerns

Access to Miller Field and Great Kills is from community streets (Hylan and Father Capodanno Boulevards and connecting streets). Access to Fort Wadsworth is via the Staten Island Expressway (I-278) via the last Staten Island exit to Bay Street and Lily Pond Road prior to the Verrazano-Narrows Bridge to Brooklyn.



Figure 4.1 Staten Island Unit

Transit service to Staten Island consists of the Staten Island Ferry, a free service, which runs between the northern end of the island and Lower Manhattan, the Staten Island Railway (SIRT), which runs north-south from the ferry terminal to Tottenville at the southern end of the island; and an extensive bus service throughout the island. Bus Route 51 provides connections between Fort Wadsworth, Miller Field and the SIRT. Bus Route 76 provides connections to the Great Kills entrance from the ferry terminal and the New Dorp station on the SIRT.

Walking and bicycling conditions are different at each site. At Fort Wadsworth, sidewalks and guided walks are provided to tour the military sites. A significant change in grade between features such as Battery Weed, an historically important military installation, and the visitor center, make walking between them difficult. Bicycle parking is provided at key locations, but the amount needs to be managed so as not to detract from the historical structures at the fort.

One mile south of Fort Wadsworth and continuing all the way to Great Kills, the City of New York owns a linear park and beach, except for Miller Field, which is owned by the Park Service. Pedestrian and bicycle accommodation are important features of the linear park. There is a boardwalk and other trails. The F.D.R. boardwalk is 2.5 miles in length

and is the fourth longest boardwalk in the world. It is not uncommon to see thousands of strollers and cyclists using these facilities in good weather.

At Great Kills, sidewalks are provided throughout the site and these are well used by walkers, joggers, and cyclists. While these facilities are attractive to recreational users, they can become overcrowded, leading to spillover use of the adjacent roadway. Further, it is two miles from the entrance to Great Kills to the beach area, which represents a very long walk for anyone who rides the bus and is dropped off at the entrance. There is no bus service within the park.

Water transportation, with the exception of the Staten Island Ferry, is nonexistent. Because the park facilities are coastal, the potential for water access has been discussed for some time. This includes linkages to Brooklyn, to Sandy Hook, to Manhattan, and to some of the harbor islands.

The parking supply at Great Kills park is limited and the lots fill up early on weekends. At present, 750 spaces are provided at Great Kills and more would be desirable. The parking lots and roadway network were recently redesigned to fall within protected zones that would not be subjected to storm erosion, and this reduced the number of available spaces.

Miller Field is a heavily used recreational are throughout the year and provides half of the recreational field use available to Staten Islanders. The Staten Island Bicycling Association meets weekly at Miller Field to begin their cycling tours. Other independent cyclists use Miller Field as a meeting place due to ample and safe parking and easy access from local communities. Miller Field needs designated bicycle paths and connections to the cityowned path at adjacent Midland Beach to the north and city-marked bicycling lanes to the south. The current bicycle path runs from South Beach to Midland Beach and plans call for bicycle connections from St. George at the Staten Island ferry terminal through fort Wadsworth and Miller Field to Great Kills park and Tottenville at the south end of the island.

4.1.2 Community Development Conditions, Issues and Concerns

Fort Wadsworth serves as the starting point for the New York City Marathon (32,000 runners) each November. All of the pre-race activities as well as the start of the race itself take place here. In addition, Fort Wadsworth serves as the finishing point for five-borough Bike New York ride, which takes place on the first Sunday in May with more than 30,000 cyclists.

Miller Field serves as an important community resource for recreational activities. Unfortunately, it is also located in an area that has limited roadway capacity. Father Capodanno Boulevard, which provides north-south access between Miller Field and I-278, currently terminates at Miller Field. In the past transportation officials have proposed extending Father Capodanno Boulevard through Miller Field to connect with Hylan Boulevard. While such an improvement would improve access, the impacts to the park would be substantial. It would deplete the park's significance and therefore is not favored by the Park Service.



Figure 4.2 View of Battery Weed at Fort Wadsworth with Manhattan in Background

A past issue existed at Great Kills Park with "hide and ride" parkers, New York commuters who would park in the parking lot at the entrance to Great Kills and then ride the express bus to Manhattan. This has been addressed by the establishment of a three-hour time limit in this lot, but similar issues may arise in the future.

4.1.3 Natural or Cultural Resource Conditions, Issues and Concerns

At Fort Wadsworth, the greatest challenge is to stabilize some of the declining military structures within the site. Resources are not available to accomplish this task and as a result, structures such as the torpedo building have a burned-out roof, the old batteries are heavily vegetated, and the lighthouse atop Battery Weed is in need of restoration. At Miller Field, the World War I airplane hangars are old and decaying. These structures would be desirable for interpretive activities or some form of historic leasing. At Great Kills, the issues are more focused on natural resources, with risks placed on the areas along the edges of roadway. At times when parking lots are full, spillover parking occurs on the entrance road, and this can impact the unpaved areas. It is often a struggle to keep high-demand areas "park-like" for visitor enjoyment.

4.1.4 Recreation Conditions, Issues and Concerns

Miller Field is heavily used by local residents for a variety of outdoor sports and other active recreational pursuits. The swamp white-oak forest is frequently visited by environmental education groups. Most visitors enter the field from New Dorp Lane, a

residential street that connects with Hylan Boulevard west of the park boundary. Parking lots are scattered in several locations and around the perimeter of the field. However, visitors want to park in the lot closest to their destinations and will park on the grass or in the handicapped parking space to do so. At issue is the impact to adjacent residential neighborhood streets when parking demand exceeds supply. At Great Kills, the aforementioned lack of transit within the park and the lack of adequate parking on busy days limits recreational access to the beach areas.

4.2 Planning and Coordination

4.2.1 Unit Plans

Specific plans for further development include:

- **Great Kills** To install an education field station with some bathrooms. This field station will provide environmental education and learning resources to local schools and environmental organizations.
- Fort Wadsworth to develop the former officer's club into a restaurant. Lack of parking around the officer's club could be a concern, however, and would likely require integration with ferry docks and shuttle services.

4.2.2 Public and Agency Coordination

When possible, park staff attend transportation planning meetings with city agencies and comment publicly on plans that may affect the park. They coordinate closely with the Triborough Bridge and Tunnel Authority and work closely with the manager of the Verrazano-Narrows Bridge. Staff also work with the Borough President's office and with U.S. Representative Vito Fossella. The park is supported by the Friends of Gateway.

4.3 Assessment of Need and System Options

4.3.1 Magnitude of Need

The Staten Island Unit has moderate to significant needs for alternative transportation systems. With three sites that are separated by some distance, the needs at each site vary. At Great Kills, the ability to link the site entrance with the recreational resources for transit riders who are dropped off at the entrance would be highly desirable. At Miller Field, while no motorized transportation services are needed, bicycle connections are necessary. At Fort Wadsworth, the proximity of the site to Brooklyn and to Manhattan is the key reason for pursuing water transportation opportunities.



Figure 4.3 Conceptual Rendering of Fort Wadsworth Ferry Dock

4.3.2 Range of Feasible Alternatives

At Great Kills, the existing bus network provided by the Metropolitan Transportation Authority is adequate to bring visitors to the park entrance. Because the park is two miles long, however, a shuttle loop that served the park itself would be of great benefit to the visitors. Operating on a seasonal basis, the service would provide important access, especially when the parking lots are filled.

At Fort Wadsworth, the Park Service is pursuing a concept that would include rehabilitation of an existing ferry dock adjacent to the Battery Weed in conjunction with the newly renovated third floor of Building 210 – Gateway's education center – and redevelopment of the officers club as a restaurant. Offering water transportation to this location would provide valuable waterborne access to this resource, which is close to Brooklyn and Manhattan. With the Staten Island Ferry operating between the northern side of the island and Lower Manhattan, one option would be to run a water taxi between the Ferry dock at Saint George and Fort Wadsworth.

■ 5.0 Jamaica Bay/Breezy Point Unit

The Jamaica Bay/Breezy Point Unit contain the Brooklyn and Queens elements of Gateway NRA. Divided into three distinct areas, the unit includes an historic airport

(Floyd Bennett Field), a beach recreation area (Jacob Riis Park), a former military site (Fort Tilden), a wildlife refuge (Jamaica Bay) and an historic pier (Canarsie). Each of these sites offers a variety of recreational activities. Tennis, golf, boating and horseback riding opportunities are also offered by authorized concessionaires. See Figure 5.1 for a map of the Jamaica Bay/Breezy Point Unit. (The superintendent of this unit is Billy Garrett.)



Figure 5.1 Jamaica Bay and Breezy Point Unit

Breezy Point lies south of Jamaica Bay on the western end of the Rockaway peninsula and contains approximately 1,059 acres and 4.5 miles of ocean beaches. This includes the popular Jacob Riis Park, transferred to Gateway from New York City, other lands in the central portion and at the tip of the peninsula that were previously acquired by the city and donated to the park, and most of the lands and facilities within the Fort Tilden military complex. Two communities remain as enclaves of single-family houses within the unit boundary – the Breezy Point Cooperative and the community of Roxbury (both represented by the administration of the Cooperative). Total enclave and city right-of-way acreage is approximately 474 acres.

The unit contains 1,448 acres of open space and facilities at the former naval air base on Floyd Bennett Field (the present park headquarters site), as well as the nearby shorelands at Dead Horse Bay, Plumb Beach, and Bergen Beach. The NPS owns all of Floyd Bennett Field, with the exception of the Armed Forces Reserve Center, which is planned to be transferred to the NPS in the near future.

Total acreage of these lands is about 82 acres. In addition, a navigational easement for the Coast Guard base landing strip extends across the central section of the field. Strategically fronting on Flatbush Avenue midway between the Belt Parkway and the Marine Parkway Bridge, Dead Horse Bay includes two facilities providing recreational services. Developed by private interests under New York City concession permits prior to Gateway establishment, the facilities are a marina, tennis courts, and a golf driving range. Plumb Beach includes a small building which houses maintenance/storage functions and public toilets, and an adjacent parking lot. Bergen Beach has one riding academy built under concession permit during the city's ownership, including an inside ring, stables, training corral, and parking lot.

5.1 Existing Conditions, Issues and Concerns

There were 2.8 million visitors to the Jamaica Bay/Breezy Point Unit in 1997. The majority of these visitors travel to Breezy Point and specifically to Jacob Riis Park. At one time, the beach at Riis Park was the premier beach destination in New York City. This is evidenced by the sheer size of the parking lot, which can accommodate 9,000 cars. While this element and others remain valuable park resources, many of the park facilities are in need of significant investment. Upon assuming control of Gateway, the Park Service inherited dozens of deteriorated buildings. Although considerable reinvestment has been made with obvious results, much more is needed simply to restore those buildings that merit preservation.

This Gateway area includes the lands, marshlands, and other habitats of the Jamaica Bay Wildlife Refuge as well as some of the other islands in Jamaica Bay. Total acreage is 2,474 acres, of which 174 are in two inland ponds in the wildlife refuge. All these lands are currently administered by the NPS. Another 361 acres include the city rights-of-way along Cross Bay Boulevard and the enclave community of Broad Channel, which lies just south of the wildlife refuge.

Present recreational uses of the wildlife refuge are limited to the visitor center/West Pond vicinity and the larger islands (Canarsie Pol, Ruffle Bar, and Little Egg Marsh), which are visited by fishermen and picnickers in boats. Fishing is also popular along and at the south end of North Channel Bridge. The remainder of the wildlife refuge core is under protected status or is available for nature study on a permit basis. Most of the other Jamaica Bay islands are suited for fishing, clamming, and baiting.

Cross Bay Boulevard provides circulation through this segment of the park. There is a small entrance road into the visitor center at the wildlife refuge.



Figure 5.2 Historic Clock Tower at Jacob Riis Park

5.1.1 Transportation Conditions, Issues and Concerns

Circulation *within* Jamaica Bay/Breezy Point is well established. The transportation system is limited however by regional access constraints. With heavy congestion on the limited regional roads, characteristic of all of New York City, getting to the unit can be quite difficult. Belt Parkway, an east-west highway connecting Staten Island with Long Island and other destinations, is the only major highway in the area. The unit is accessible primarily via Flatbush Avenue. Transit, the principal means of access for so many people in New York, does not serve the unit well. The only attraction that is adjacent to a transit station is the Jamaica Bay Wildlife Refuge Visitor Center. All others are too far to walk to from a transit station. Bus service is available from the stations, but the need to transfer limits the attractiveness of transit. Given the limited road access, the congestion on the roads that do exist, and the limitations of the transit system, the level of visitation at Jamaica Bay is lower than it could be.

Within Breezy Point, development is located around a well-established road system. Rockaway Beach Boulevard, the primary east-west circulation route, connects with the Marine Parkway Bridge, which provides access to Brooklyn, and with Beach Channel Drive which serves the Rockaways and Queens. As indicated previously, the primary visitor destination is Jacob Riis Park, located just south of the Marine Parkway Bridge.

The access route for Floyd Bennett Field also services the great majority of visitors to Breezy Point. Use of the field is currently negligible, but future development must be planned to avoid drawing large numbers of people during periods of heavy beach use and

hence higher traffic volumes on Flatbush Avenue. Parking places at Floyd Bennett Field, and NPS shuttle vehicles running between the field and Breezy Point, would relieve some of the traffic congestion on the Marine Parkway Bridge and reduce the need for weekend parking on Breezy Point itself.

Virtually all of the Jamaica Bay/Breezy Point unit is surrounded by water. At present, no waterborne transportation systems are in place. See discussion under unit plans.

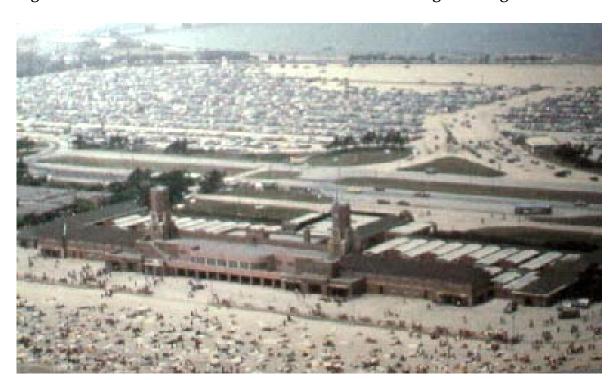


Figure 5.3 Aerial View of Beach at Riis Park with Parking in Background

5.1.2 Community Development Conditions, Issues and Concerns

The Breezy Point/Jamaica Bay Units are surrounded by several well developed urban neighborhoods in the Boroughs of Brooklyn and Queens. Neighborhoods influenced by the units include: Neponsit, Belle Harbor, Howard Beach, Broad Channel, and Breezy Point. These neighborhoods vary economically from working class to upper middleclass. All of the neighborhoods include a mix of commercial and residential uses with densities of ranging from 10 to 14 units to the acre.

The unit's influence on the adjoining neighborhoods is difficult to determine because of their built-up, urban character. The neighborhoods along Cross Bay Boulevard and Rockaway Beach Boulevard experience a significant amount of congestion during the peak summer months with beach-related traffic. However, because of the number of beaches along the Rockaway Peninsula, including Riis Park, the amount of recreation area-based congestion is a relatively small proportion of the overall traffic. Most of the neighborhoods that experience congestion from the Rockaway Peninsula beaches welcome the additional economic activity that comes with the traffic.

5.1.3 Natural or Cultural Resource Conditions, Issues and Concerns

The key natural resource issue for the Jamaica Bay/Breezy Point Unit is the preservation and enhancement of existing natural areas. An important component to this is the Jamaica Bay Wildlife refuge. The wildlife refuge includes 2,474 acres of prime bird habitat, and is a key stop along the Atlantic flyway for thousands of land and shore birds. Most of the land contained within the refuge is protected and use of the refuge is tightly controlled.

The refuge has had an impact of alternative transportation in the Recreation Area. A dispute has recently arisen between bird and wildlife interest groups and bicycling groups that would like to widen Cross Bay Boulevard to include a full-width bicycle lane to complete the Rockaway-Gateway Greenway.

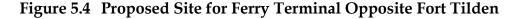
5.1.4 Recreation Conditions, Issues and Concerns

Most lands at Breezy Point still remain in other than public park uses, generally under permit from the NPS. The primary recreation destination is Riis Park. This park was initially established by the City of New York in the 1930s. It features a mile of ocean beach and a highly developed back-beach area. The beach, divided by wooden pilings and rock jetties into 14 bays, is equipped with 15 lifeguard stations. In the back-beach area is a concrete boardwalk extending the full length of the beach, with several conveniently placed concession stands. Centrally located is a prominent bathhouse, which, once renovation is completed, will provide shower and locker facilities and related support services. The bathhouse is flanked on both sides by paddle-tennis and handball courts, ball fields, and tot lots; the entry mall area houses a variety of food concessions, recreational open spaces, and shuffleboard facilities. Completing this intensely developed area is an 18-hole pitch-and-putt golf course. The entire Jacob Riis facility is considered a significant historic resource representative of public park development in this county.

Fort Tilden is also used as a recreation area. The core area of Fort Tilden contains residences housing Park Service personnel. On-fort facilities include tennis courts, a basketball court, and a parade ground that partially encircle the residential complex; these receive minimal use. The upland area receives some use by environmental education groups. The beach in this western segment is a very popular spot for surf-fishing.

5.2 Planning and Coordination

Specific transportation plans for Jamaica Bay/Breezy Point include the implementation of a new water transportation system. Current plans call for an extensive system connecting the different areas in the park and large population centers such as Manhattan. Various planning studies have been completed evaluating the feasibility of ferry service to the park. At present, the Park Service and other agencies are issuing a request for proposals to jointly develop (with a private partner) a ferry terminal site near the southern pier of the Marine Parkway Bridge. It is anticipated that a ferry from this location could connect to Manhattan, Staten Island, and possibly Sandy Hook.





5.2.1 Public and Agency Coordination

Jamaica Bay/Breezy Point coordinates with various local government and regional agencies with respect to on- and off-site transportation issues. This includes the New York City Department of Transportation, the Borough President's Offices in Brooklyn and Queens, and the Metropolitan Transportation Authority.

5.3 Assessment of Need and System Options

5.3.1 Magnitude of Need

The need for alternative transportation in the Jamaica Bay/Breezy Point Unit is significant. Utilization of the Unit is compromised by access constraints among other factors. The limitations of the existing transit system are also apparent and improvements are needed. At this time, the focus of these improvements is on water transportation access, but additional land transit services may be justified as well.

5.3.2 Range of Feasible Alternatives

Waterborne Transit System

The current plan includes a potential ferry dock within the Rockaway Inlet adjacent to Fort Tilden. The concept would be to operate a high-speed ferry between this site and Lower Manhattan and to create a terminal at the dock. Smaller boats could then connect with other destinations, including the Wildlife Refuge, Floyd Bennett Field, and even with the adjacent Kennedy International Airport.

Enhanced Bus Service

The current bus service to Riis Park does not adequately serve the potential market. Routes should be added and/or redesigned to allow for express service from areas with high auto dependence. This would decrease travel time and potentially increase patronage. The addition of cruiser-style/over-the-road buses to these routes would allow for the additional space needed for beach paraphernalia for family outings.

In addition to new routes, existing bus routes along Flatbush Ave (Q35) and Rockaway Beach Blvd (B169) could be redesigned to allow for more efficient timed transfers with existing subway lines. (The A, L, 2, 3, 4, 5 trains are all relatively close to park facilities, yet are not often used for travel to the park.) Timed transfers would allow for decreased travel time and increased comfort for park patrons.

Intra-Unit Shuttlebus

An initially small shuttle system, connecting points inside the unit could be implemented as a way to alleviate traffic on local streets around the park. Park visitors could park at one location and be taken to other park destinations as they are developed and interpreted. The system should be designed to allow for changes in vehicle size to adapt to different passenger loads. Potential points to be connected include Floyd Bennett Field, Fort Tilden, Breezy Point, and the Jamaica Bay Wildlife Refuge.

■ 6.0 Bibliography

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National Park Service, Gateway National Recreation Area Site Management Plan for Fort Wadsworth, Staten Island Unit, 1995.

NPS web site: www.nps.gov/gate.

■ 7.0 Persons Interviewed

Billy G. Garrett, Assistant Superintendent

Lynn Pilgrim, Director of Planning and Professional Services

Jeanette Parker, Assistant Superintendent (Staten Island Unit)

Martin O'Toole, Site Ranger-Fort Wadsworth (Staten Island Unit)

Louis Venuto, Chief of Interpretation (Sandy Hook Unit)

Monmouth County Freeholder Theodore Narozanick (Sandy Hook Unit)